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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,850	07/25/2001	Ikuo Aoki	1293.1228	3894
49455	7590	02/06/2006	EXAMINER	
STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005			ORTIZ CRIADO, JORGE L	
			ART UNIT	PAPER NUMBER
			2656	

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/911,850

Applicant(s)

AOKI, IKUO

Examiner

Jorge L. Ortiz-Criado

Art Unit

2656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6-14,16,18,19,21,22,24 and 25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,6-14,16,18,19,21,22,24 and 25 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

By

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1, 6, 7-10, 24 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 and 24-25 each recites “user data is recorded in the data recording area of the first zone before a predetermined pattern is recorded in at least one of the coupling areas of the first zone..., and recording a predetermined pattern in an additional coupling portion of the zone”

Description from the specification related to predetermined **pattern** includes:

The specification at page 4, section [0018], states “After an action of recording user data in a zone (n-m) is completed, predetermined pattern is recorded in a section of the zone”; section [0020] states “the aforementioned predetermined pattern recorded in a section of the recorded zone is not related to the user data and may be arbitrarily determined based on the system in

use”; section [0022], states an arbitrary pattern in the coupling area. However, it is not clear what the Applicants meant to be the predetermined pattern not related to the user data and “arbitrarily determined based on the system in use”. It is not clear how such system defines the difference in the arbitrarily pattern and the relationship with the user data. Therefore, the specification does not enable one skilled in the art as to determine such predetermined pattern, to make the invention. For, porpoise of examination the claim are interpreted with the broadest reasonable interpretation.

2. Claims 11, 24 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 11 and 16, each recites “arbitrary data is recorded in the coupling area”. Description from the specification related to predetermined pattern includes: section [0022], states an arbitrary pattern in the coupling area. However no arbitrary data recorded in the coupling area is found described in the disclosure. Hence, this limitation is new matter.

Claim 11, recites, “arbitrary data is first recorded in the zone start pattern”, “arbitrary data is recorded in the zone end pattern. However, no arbitrary data is first recorded in the zone start pattern”, “arbitrary data is recorded in the zone end pattern” is found described in the disclosure as claimed. It seems that maybe the arbitrary data is how the zone start/end patterns

are the kind of patterns recorded as the zone start/end patterns. See for example detailed description paragraph [0024], in relation with Fig. 4.

Claim 24, recites the limitation “recording a zone start pattern in a leading portion of the user data portion of the zone”. The Examiner cannot assert where in the disclosure this limitation is found. Hence, the limitation is considered new matter. For purpose of examination this limitation is interpreted as to “recording a zone start pattern in the zone”.

Dependent claims 6-14, 18-19, 21-22, fall together accordingly, with their respective parent claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 6-14, 16, 18-19, 21-22 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, recites functional language not associated with a structure or element and is vague and indefinite. Functional language includes “during a recording of the user data”, “when a first zone is detected”, “until a next zone is detected”, is not clear where or what is meant in the claims as the source for these functions in association with a structural limitation of the optical disk claimed.

Claim 1 recites the limitation "the coupling areas" in line 9 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 and 7, each recites, recites functional language not associated with a structure or element and is vague and indefinite. Functional language includes “wherein a sequence on recording or reproduction of data in each zone is performed according to a following sequence:” is not clear where or what is meant in the claims as the source for these functions in association with a structural limitation of the optical disk claimed.

Claim 11, recites functional language not associated with a structure or element and is vague and indefinite. Functional language includes “during a recording of user data” is not clear where or what is meant in the claims as the source for these functions in association with a structural limitation of the optical disk claimed.

Claim 13 recites the limitation wherein land and groove recording and reproduction is possible, respectively, to and from more than one spiral of the optical disc, but only a desired result of “possible recording and reproduction” is recited in the claim. Accordingly, it is unclear from the claim as to how such possible recording and reproduction is obtained and the association with the structure of the recording since there is no structure relating the recording medium that makes the recording medium to get such desired result.

Dependent claims 8-10, 12, 14, 16, 18-19 and 21-22 fall together accordingly, with their respective parent claims.

Claim 25, recites the limitation “the zone” in lines 3, 4 third line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 6-10 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoki, Japanese Publication No. 2000-195060.

Regarding claim 1, Aoki discloses an optical disc, comprising:

track grooves formed in a radial direction of the disc, with the disc being divided into a plurality of zones (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2),

the track grooves being formatted into a waved pattern in the radial direction of the disc, overlapped over recorded user data, so as to record zone address information for each of the divided zones based on a predetermined modulation rule (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2,5),

wherein each zone has an initial recording capacity and, during recording of the user data, in each zone a zone start pattern and/or zone end pattern is additionally recorded in each zone” (See Detailed description paragraphs [0028]-[0030]; Drawings 5, “Address information of the zone recorded in the ID part), when a first zone is detected, user data (data recorded in data part)

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is recorded in the data recording area of the first zone before predetermined pattern is recorded in at least one of “the coupling areas” of the first zone, which is recorded until a next zone is detected (See Detailed description paragraphs [0028]-[0030]; Drawings 5 shows the pattern division between each zones in each m-1,m, and m+1 zones etc.)

In regard to claims 6 and 7, Aoki discloses wherein the track grooves comprise a land portion and a groove portion, (See Detailed description paragraphs [002]-[008], [0013]-[0015]; Drawings 1,2,5) Functional language “wherein a sequence on recording or reproduction of data in each zone is performed according to a following sequence:” does not provides association with a structural limitation of the optical disk claimed.

Regarding claim 8, Aoki discloses wherein the optical disc is a DVD-RAM disc (See Detailed description paragraphs [002]-[008], [0013]-[0015]; Drawings 1,2,5)

Regarding claim 9, Aoki discloses wherein each zone has a plurality of sectors (See Detailed description paragraphs [002]-[008], [0013]-[0015]; Drawings 1,2,5)

Regarding claim 10, Aoki discloses wherein each of the plurality of sectors has a sector address portion to store a corresponding sector address (See Detailed description paragraphs [002]-[008], [0013]-[0015]; Drawings 1,2,5)

Regarding claim 25, Aoki discloses a method of recording data on an optical disc, comprising:

recording user data(data recorded in data part) in the user data portion of the zone (See Detailed description paragraphs [0028]-[0030])

recording a predetermined pattern in an additional coupling portion of the zone, after the recording of the user data (Drawings 5 shows the pattern division between each zones in each m-1,m, and m+1 zones etc.)

recording a zone start pattern and/or zone end pattern in each zone during recording the user data (See Detailed description paragraphs [0028]-[0030])

dividing the optical disc into a plurality of zones; formatting a zone address portion of one of the zones to include a wobble pattern based on a predetermined modulation rule and corresponding to an address of the zone (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 11, 12-14, 16, 18, 19, 21-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki, Japanese Publication No. 2000-195060 in view of Hui U.S. Patent No. 4,229,808.

Regarding claim 11, Aoki discloses an optical disc, comprising:

a plurality of tracks formed in a spiral direction of the optical disc, each track having at least a groove portion (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2); and

a plurality of zones, each zone including a predetermined number of the plurality of tracks and each zone further including a data recording area (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1, 2, 5),

a zone start pattern at an inner circumference of the data recording area (See Detailed description paragraphs [0028]-[0030]; Drawings 5, "Address information of the zone recorded in the ID part"),

at least one coupling area at inner circumference of the zone start pattern and/or an outer circumference of the zone, the coupling area being separate from a user data recording area of each zone (See Detailed description paragraphs [0028]-[0030]; Drawings 5 shows the pattern division in the coupled area between each zones in each m-1,m, and m+1 zones etc.)

wherein the optical disc is formatted to include zone addresses for each zone by formatting a portion of the corresponding zone track grooves, in each zone, to include a wobble pattern based on a predetermined modulation rule, and wherein (See Detailed description paragraphs [007]-[008], [0013]-[0015], Drawings 1, 2)

during recording of user data, in each zone an arbitrary data is first recorded in the zone start pattern, then user data is recorded in the data recording area, and then arbitrary data is recorded in the coupling area. (See Detailed description paragraphs [007]-[008], [0013]-[0015], [0028]-[0030]; Drawings 5)

Aoki has the desirability of obtaining the start position of each zone by providing a zone start pattern at an inner circumference of the data recording area, so as to detect where a zone start and which inherently provides when a previous zone ends. But, Aoki does not expressly disclose a zone end pattern at an outer circumference of the data recording area.

However, this feature is well known in the art and is evidenced by Hui, which discloses an optical disk comprising: a plurality of tracks formed in a spiral direction of the optical disc, a plurality of zones (segments), each zone including a predetermined number of the plurality of tracks and each zone further including a data recording area where user data is recorded (A,B,C) and a zone end pattern (E) at an outer circumference of the data recording area (see Figs. 1 and 2)

It would have been obvious to an ordinary skill in the art at the time of the invention to include a zone end pattern at an outer circumference of the data recording area, in order to signify the end of the zones (segment) and prevents any overlapping of recorded data by detection of the zone end pattern, as taught by Hui.

Regarding claim 12, Aoki further discloses wherein each track further includes a land portion (See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2)

Regarding claim 13, Aoki further discloses wherein land and groove recording and reproduction is possible, respectively, to and from more than one spiral of the optical disc See Detailed description paragraphs [007]-[008], [0013]-[0015]; Drawings 1,2)

Regarding claim 14, Aoki discloses wherein the optical disc is a DVD-RAM disc (See Detailed description paragraphs [002]-[008], [0013]-[0015]; Drawings 1,2,5)

Regarding claim 16, Aoki discloses wherein the “arbitrary pattern” is recorded in the coupling area, with the pattern is based on a recording or reproduction system to perform recording or reproduction, respectively, to or from the optical disc (See Detailed description paragraphs [007]-[008], [0013]-[0015], [0028]-[0030]; Drawings 5 shows the pattern division between each zones in each $m-1$, m , and $m+1$ zones etc.)

Regarding claim 18, wherein the predetermined modulation rule is one of an FM modulation, an AM modulation, and a PM modulation (Inherently to Aoki)

Regarding claim 19, Aoki discloses wherein the predetermined number of the plurality of tracks for each zone is based upon the data recording capacity needed for each zone plus an arbitrary recording capacity (See Detailed description paragraphs [007]-[008], [0013]-[0015], [0028]-[0030]; Drawings 5-“entire zone capacity”)

Regarding claim 21, Aoki discloses wherein each zone has a plurality of sectors (See Detailed description paragraphs [002]-[008], [0013]-[0015]; Drawings 1,2,5)

Regarding claim 22, Aoki discloses wherein each of the plurality of sectors has a sector address portion to store a corresponding sector address (See Detailed description paragraphs [002]-[008], [0013]-[0015]; Drawings 1,2,5)

In regard to claim 24, Method claim (24) is drawn to the method of recording the corresponding recorded disk claimed in claim 11. Therefore method claim 24 corresponds to recording medium of claim 11 and is rejected for the same reasons of obviousness as used above.

Response to Arguments

In view of the amendments made to the claims and after further consideration under 112 basis as outlined above under section headings and of the prior art of record. A new rationale was necessitated by amendment and Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) and rationale of rejections.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L. Ortiz-Criado whose telephone number is (571) 272-7624. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm), Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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